

CLAIMS

We claim:

1. A transgenic non human mammal whose genome comprises a nucleic acid construct
5 comprising a DNA sequence encoding a receptor which binds nucleotides, wherein said
receptor comprises the amino acid sequence of SEQ ID NO:2.
2. The transgenic non human mammal of claim 1, wherein said mammal expresses said
receptor.
3. The transgenic non human mammal of claim 2, wherein said mammal over expresses
10 said receptor.
4. The transgenic non human mammal of claim 2, wherein said mammal expresses said
receptor ectopically.
5. The transgenic non human mammal of Claim 1, wherein said DNA sequence encoding
a receptor is a genomic DNA sequence.
- 15 6. The transgenic non human mammal of Claim 1, wherein said DNA sequence encoding
a receptor is a cDNA sequence.
7. The transgenic non human mammal of Claim 6, wherein said cDNA sequence
comprises SEQ ID NO:1.
8. The transgenic non human mammal of Claim 1, whose genome comprises more than
20 one copy of said nucleic acid construct comprising said DNA sequence encoding said
receptor.
9. The transgenic non human mammal of Claim 1, wherein the mammal is a mouse.
10. The transgenic non human mammal of Claim 1, wherein said construct comprises an
inducible promoter operably linked to a DNA sequence encoding a receptor which binds
25 nucleotides, wherein said receptor comprises the amino acid sequence shown in SEQ ID
NO:2.

11. The transgenic non human mammal of Claim 10, wherein said construct additionally comprises tissue specific regulatory elements.

12. A transgenic non human mammal whose genome comprises a nucleic acid construct comprising an antisense nucleic acid molecule complementary to a nucleic acid molecule
5 which encodes a receptor, wherein said receptor comprises the amino acid sequence of SEQ ID NO:2, wherein said antisense nucleic acid is transcribed, and wherein the transcribed antisense nucleic acid hybridizes to mRNA encoding said receptor, thereby reducing the translation of said mRNA.

13. The transgenic non human mammal of claim 12, wherein the nucleic acid molecule
10 which encodes said receptor comprises SEQ ID NO:1.

14. The transgenic non human mammal of claim 12, wherein said construct comprises an inducible promoter operably linked to said antisense nucleic acid molecule.

15. The transgenic non human mammal of Claim 12, wherein the mammal is a mouse.

16. The transgenic non human mammal of claim 12, wherein said construct additionally
15 comprises tissue specific regulatory elements.

17. A transgenic non human mammal comprising a disruption in the endogenous P2Y4 receptor gene, wherein said disruption has been introduced into its genome by homologous recombination with a DNA targeting construct in an embryonic stem cell, such that the targeting construct is stably integrated in the genome of said mouse, wherein the disruption of
20 the P2Y4 receptor gene results in an inability of said mouse to produce detectable levels of P2Y4 receptor.

18. The transgenic non human mammal of Claim 17, wherein said mammal is a mouse.